Project management
MS project tutorial

Part 1: Project beginning and the Gantt chart

Purpose

- Project management by using Microsoft Project software

Introduction

Project management is a process of organizing, scheduling and managing a set of tasks.

In the phase of project planning the project goals have to be known. The project is divided to several tasks with known duration.

In the phase of scheduling it is determined when a single task begins and ends. The tasks are scheduled in such a way that the resources, costs and the duration of the project are optimized.

The table below lists 10 tasks of a project and their duration in days.

Task	Duration
A	0
B	5
C	2
D	3
E	4
F	1
G	6
H	2
I	3
J	0

Assignments

1. Open the MS Project software and select a new project.

Steps	Description
Open MS Project	
Begin new project	File > New
Select view: Gantt chart	View > Gantt chart

| Enter project start date: | Project > Project Information |

Start date:
29.4.2013

2.   Insert tasks in the same order as given in table 1 into the Gantt chart.

| Steps | Description |

Select the first line in the column Task Name

Enter the task name and press ENTER.

Repeat, until all tasks are Inserted.
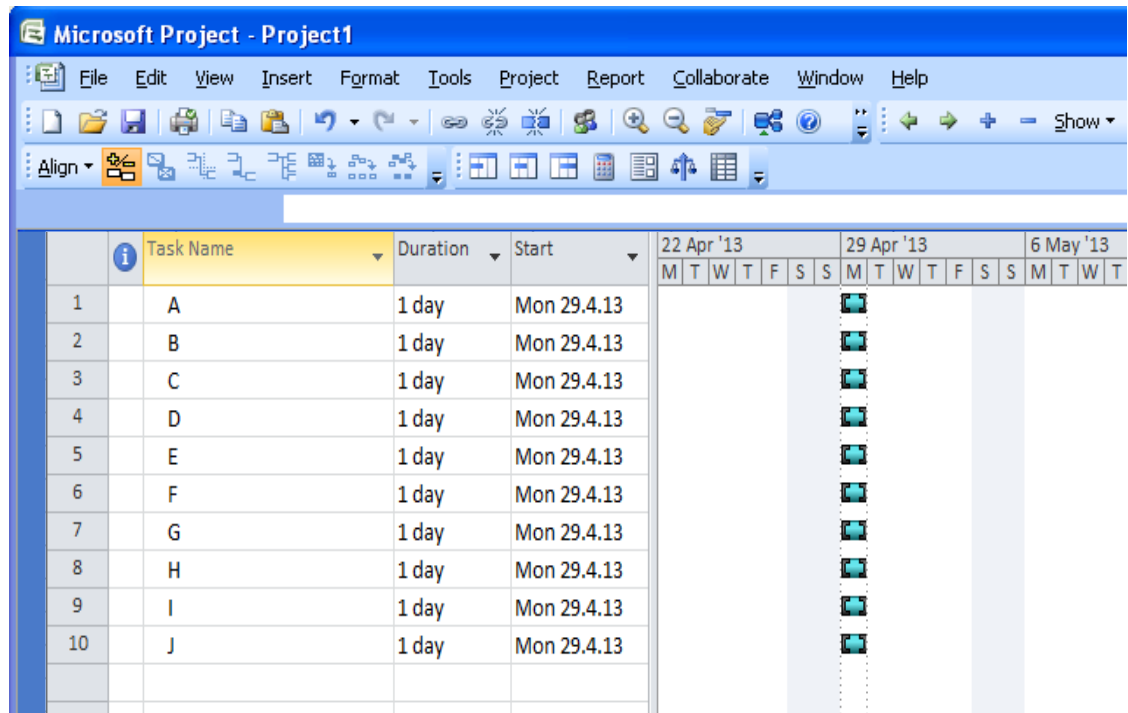
3. Determine the duration of tasks.

Steps	Description
Select the field Duration of the first task	
Enter the value 0 and press ENTER	
Enter the values for all tasks.	

label	meaning
m	minutes
h	hours
d	days
w	weeks

Table 2: Time units

The task with duration 0 is called the milestone. Milestones serve for marking important events in a project. For example, they are used for marking the beginning and the end of a project.

4. Save the project into your folder.

Steps	Description
Select in the File menu:	File > Save as
Select your folder	
Enter the name of the project and press ENTER	
Select:	Save 'Project1.mpp' without a baseline

## Part 2: Determining the dependencies between tasks and critical path

Goal

-   Linking the tasks in the Gantt chart and the work with time constraints

Introduction

The tasks in a project are interdependent. A task can begin after the completion of previous tasks or combined with other tasks. The start of a certain task is therefore dependent of the finish of other (previous) tasks.

The following dependencies may apply for two tasks: finish-to-start, start-to-Start, finish-to-finish and start-to finish.

-   finish-to-start: the task cannot start until the finish of the previous task.

-   start-to-start: the task can start at the same time as the previous task.

-   finish-to-finish: the task cannot finish until the finish of the previous task.

-   start-to finish: the task cannot finish until the start of the previous task.
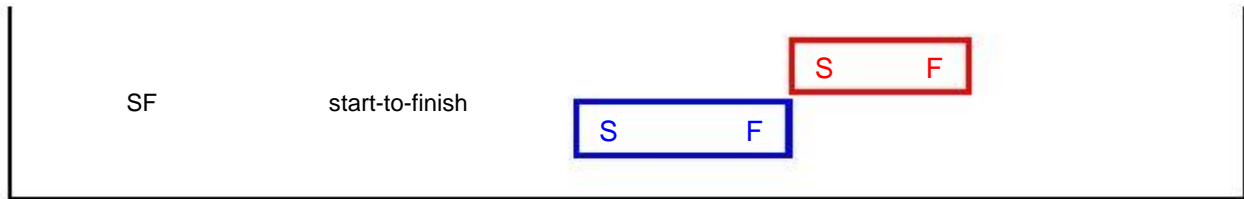   .

Label	Description	Gantt chart
FS	finish-to-start	
SS	start-to-start	
FF	finish-to-finish	

		S	F
SF	start-to-finish		
		S	F
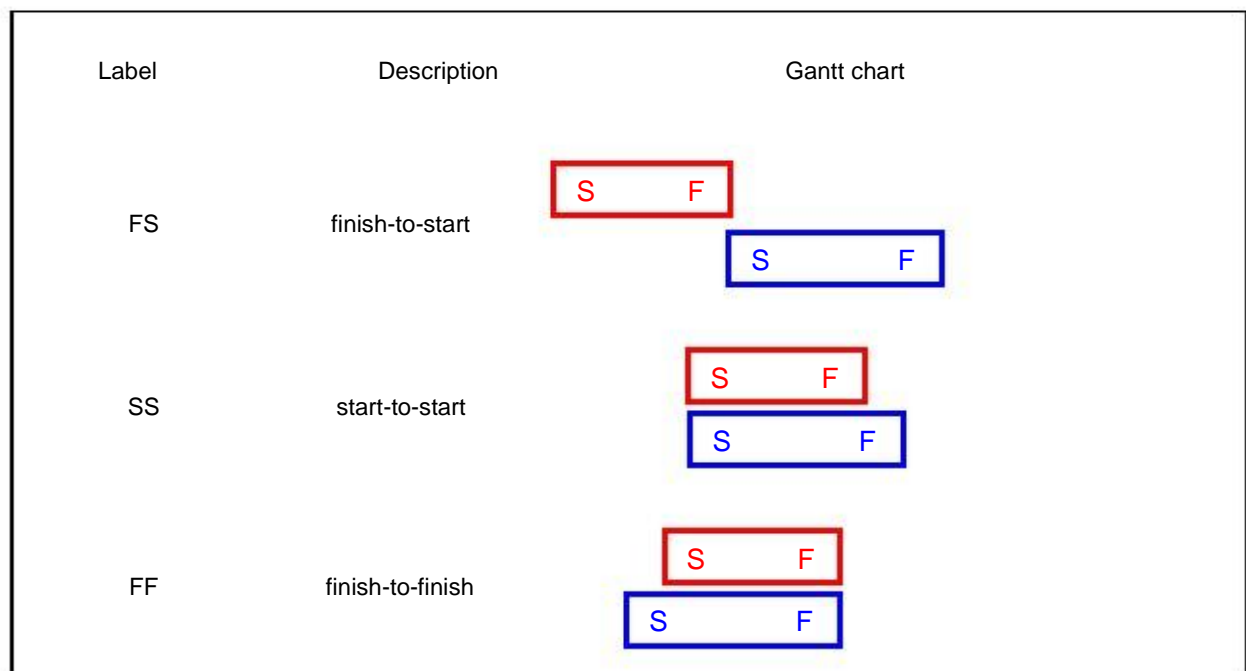
Figure 1: Task dependencies

The table gives task dependencies for our example. All dependencies are finish-to-start.

Task	Previous task (predecessor)
A	-
B	A
C	B
D	C
E	D
F	E
G	B
H	G
I	H
J	F, I

Assignments

5. Link the activities in the Gantt Chart with finish-to-start dependencies.

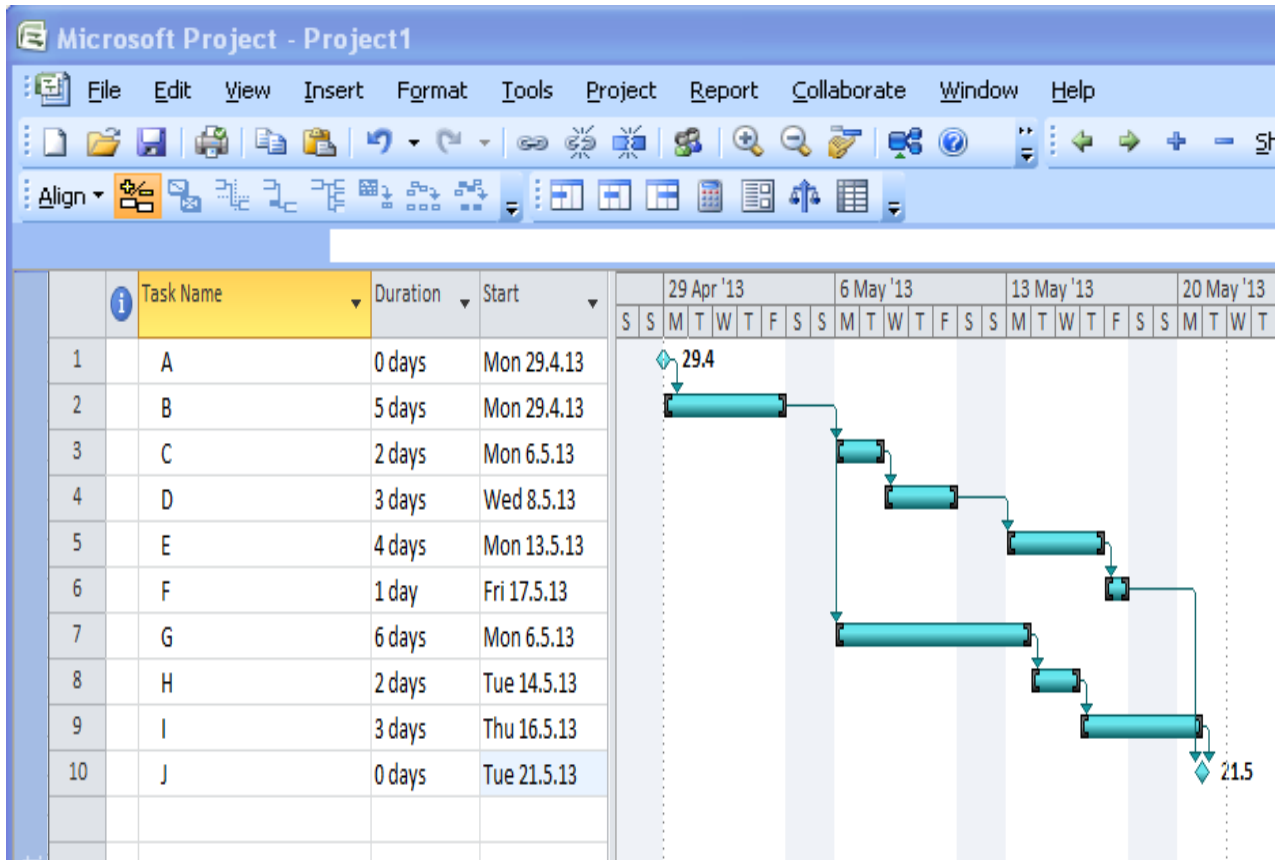| Steps	Description
Select task A	CLICK on task A
Select task B	Hold CTRL and CLICK on task B
Select Link Tasks in the toolbar	Edit > Link tasks or the button in the toolbar Tasks are connected by a finish-to-start dependency.
To delete the connection select Unlink Tasks	Edit > Unlink tasks or the button in the toolbar The proper tasks (that you wish to link or unlink) have to be selected!
Connect all the tasks according to the table above	
Use Zoom In and Zoom Out So that the entire project is visible	Select or in the toolbar Or use View > Zoom and select Entire project

Critical path

The critical path is the longest path in the Gantt chart comprised of critical tasks.

Critical tasks don't have any time slack.

6. Determine the critical path in the Gantt chart.

Steps	Description
Use tool GanttChartWizard	Select Format > Gannt Chart Wizard or the button in the toolbar
	Select Next and Critical path
	Select Next and Resources and dates
	Select Next and Yes, please
	and Format it
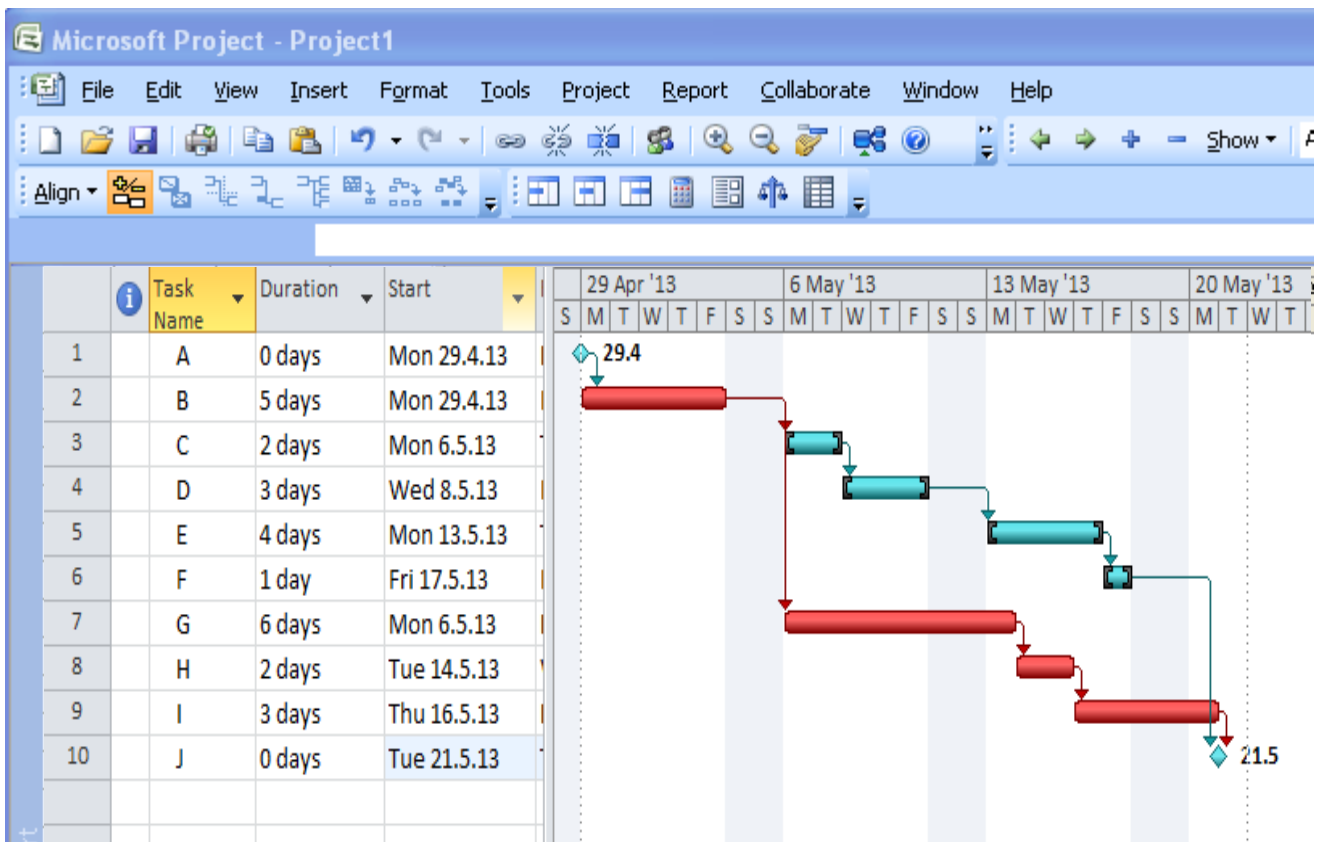
Change the duration of noncritical tasks and observe the critical path.
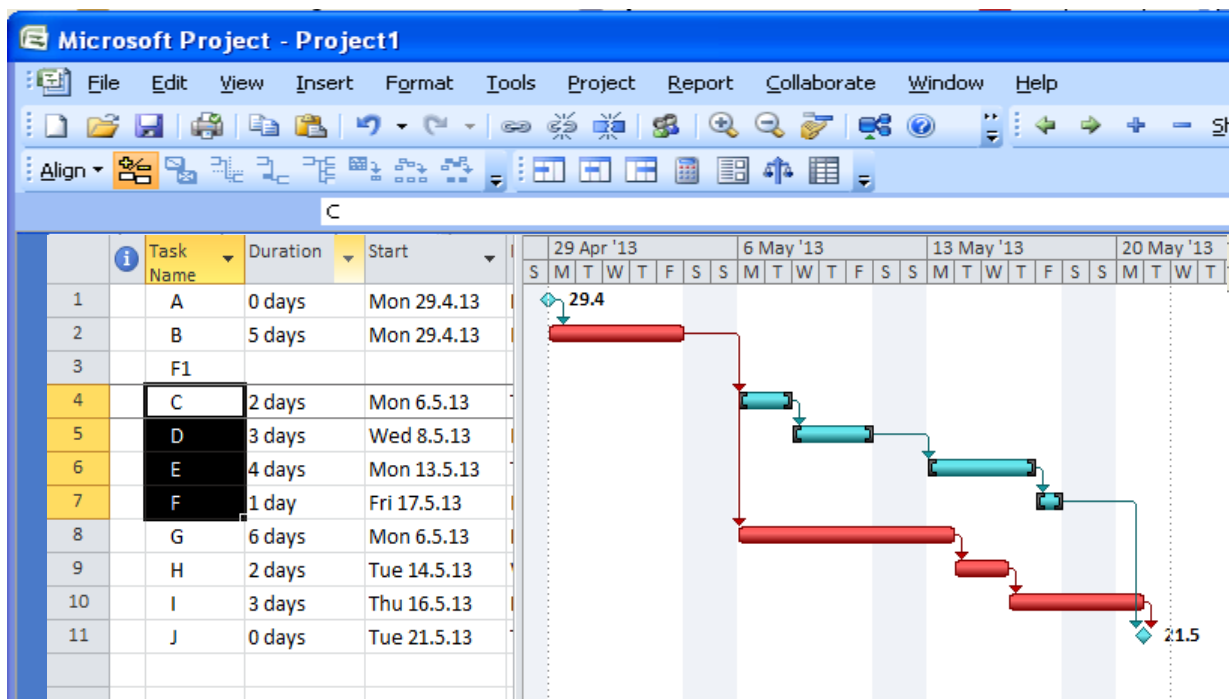
Return the Gantt chart back to its original state.

Project phases

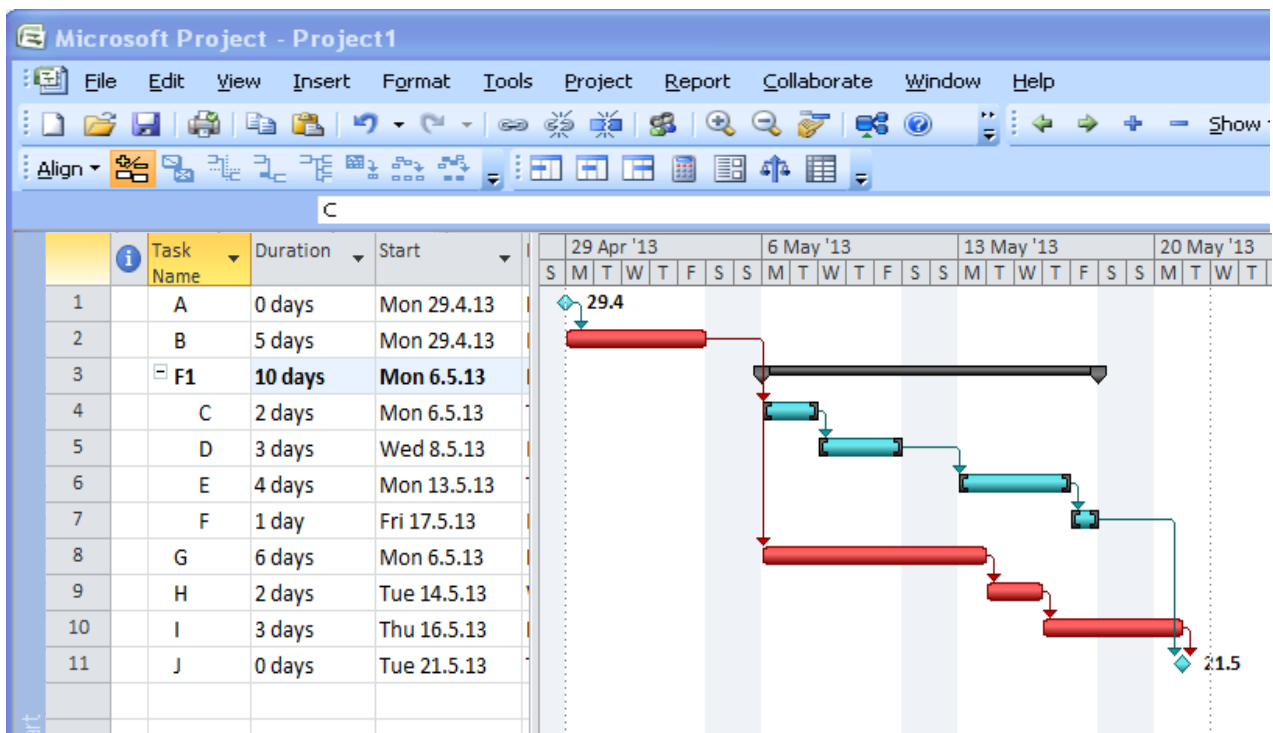If a project is comprised of many tasks they can be combined into project phases.

Phase	Tasks
F1	C, D, E, F
F2	G, H, I

7. Add project phases

Steps	Description
Add new task before B	Select task C
	Select Insert > New Task
	Enter phase name F1
	Select tasks C, D, E, F

Select ➡

Repeat for phase 2.
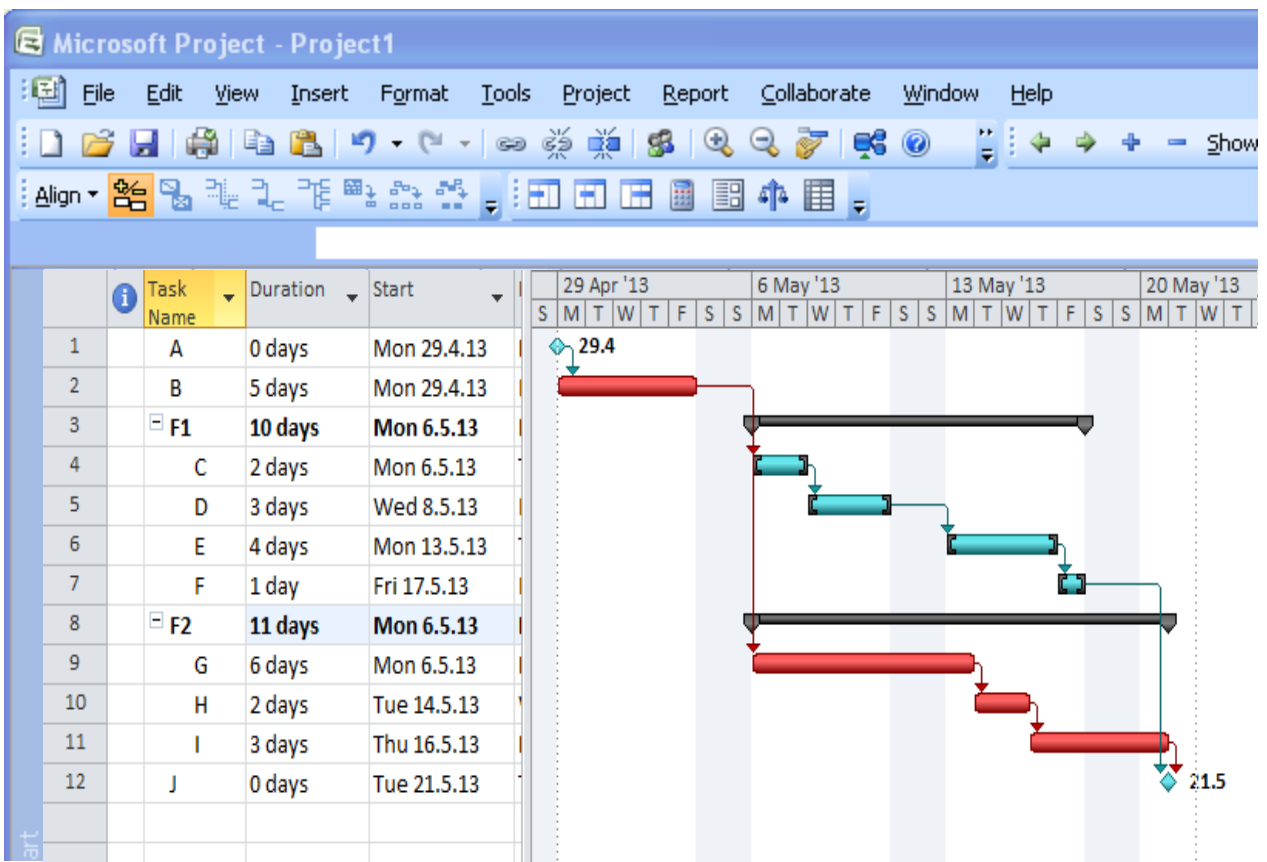
It is important that only tasks are linked. There must be no connection between tasks and phases or between phases! If there is such a connection, it has to be removed!